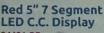


# MARLIN P. JONES & ASSOC. INC.

# WEB: www.mpja.com Online Buying

# Order: 800-652-6733 Fax: 800-432-9937 Info: 561-848-1414





34491 OP \$5.95 ea



4-50VDC Universal **Battery Alarm Meter** 33991 ME | \$9.95 ea



300mm Linear Guide Rail Assembly with Stepmotor 33997 MI | \$119.95 ea



5 Vdc 3A Plug Power Supply 34291 PS | \$2.95 ea



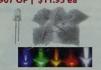
#### Linear Mechanical Starter Kit

Different over all lengths available.

34259 LK | 200mm | \$29.95 ea 34260 LK | 300mm | \$34.95 ea 34261 LK | 500mm | \$39.95 ea



200 each Red.Yellow. Green.Blue.White Clear 5mm LEDs 33907 OP | \$11.95 ea



Adjustable 3 Axis Stage 33383 MI | \$169.95 ea



12 Vdc 3A Power Supply 34445 PS | \$6.95 ea

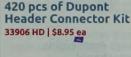


#### T8-2 Single Start Leadscrew & Nut

Different over all lengths available.

34251 LK | 150mm | \$5.95 ea 34252 LK | 200mm | \$6.95 ea 34253 LK | 250mm | \$7.95 ea 34254 LK | 300mm | \$8.95 ea

34255 LK | 400mm | \$10.95 ea 34256 LK | 500mm | \$12.95 ea



Solder 60/40 Rosin Core

33593 TL | 1mm | \$9.95 ea

33594 TL | .6mm | \$9.95 ea

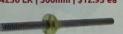


Mechanical Buzzer 34101 SU | 1.2VDC | \$1.25 ea 34102 SU | 3VDC | \$1.25 ea 34104 SU | 12VDC | \$1.25 ea



12 Vdc 2A Plug **Power Supply** 34142 PS | \$6.95 ea





#### 12VDC SPDT **Automotive** Relay 33947 RL \$1.95 ea



**5VDC Mini Fluid Pump** 1L/Min



SONY 4" PolyCone **Custom Speaker** 34151 SP | \$4.95 ea



12mm Latching Connector Pair

34171 PL | 3 Pin | \$2.89 ea 34173 PL | 5 Pin | \$2.89 ea 34175 PL | 7 Pin | \$2.89 ea



#### SPDT Momentary **Pushbutton Switch**

34155 SW | Red | \$1.95 ea 34156 SW | Green | \$1.95 ea 34157 SW | Blue | \$1.95 ea

34158 SW | Yellow | \$1.95 ea SPDT Alternate **Action Pushbutton** Switch

34161 SW | Red | \$1.95 ea 34162 SW | Green | \$1.95 ea 34163 SW | Blue | \$1.95 ea 34164 SW | Yellow | \$1.95 ea



**Automotive** Relay Pigtail Socket

33948 RL \$1.89 ea



# Our Most Popular Products Visit us at www.mpia.com for complete line of products

# Arduino/Rasberry-Pi

#### Programmable Digital Thermostat "C"

32709 MP | \$9.95 ea



# Thermostat, Auto Heat/Cool, "C" 32964 MP | \$13.95 ea



#### Arduino 37 pc. Sensor Starter Kit 33317 MP | \$35.95 ea

Sensor kit for general use with Arduinos and other microcontrollers This 37pc. kit is ideal for Classrooms or Instructional Labs. Includes Handy latching compartment storage box and Experimenter's Manual covering Sketches & use with the Arduino





#### Digital Temperature Controller

32184 MP | Celsius | \$5.95 ea

32764 MP | Fahrenheit | \$6.95 ea Compact digital thermostat with isolated relay

output and 3digit 0.28" LED display. Features: Programmable set Points, Cool or Heat control, Hysteresis, Delay and High Temp. Alarm. Power: 12VDC Current: ~65mA Relay energized Accuracy: Measurement : 0.1deg. Relay: SPST-NO 10A/14VDC; 5A/125VAC Sensor: NTC waterproof probe (12in.

leads) Terminal Strip for Power & Relay contacts.

Ultrasonic Range Module 19605 UT | \$3.31 ea



Serial 2 X 16 LCD 31164 MP | \$9.95 ea



# Motion Detector with Light Sensor

31227 SC | \$3.95 ea



Programmable Security Key Pad 31928 SC | \$49.95 ea



I/R XMIT/Receiver Pair 32352 MP | \$3.95 ea



RFID/NFC Reader/ Writer 31111 MP | \$11.95 ea



Motion Detector Mini Module 32061 SC | \$3.95 ea



12VDC 0-10 Sec. Time **Delay Relay Module** 



Perfboard Shield Kit 32795 MP | \$4.95 ea



Motor Shield Board 30292 MP | \$10.95 ea



PIR Relay Module 32183 SC | \$5.95 ea



8X8 RGB Programmable LED Matrix 34350 MP | \$3.95 ea



Sensor Shield 31058 MP | \$7.95 ea



2 X 16 LCD Shield 31059 MP | \$11.95 ea



Microwave Motion Detector

31234 SC | \$8.95 ea



Adj. Pulse Generator 31070 MI | \$5.95 ea



**Dual Audio Amplifier** 32705 MP | 50Watt | \$14.95 ea 32706 MP | 100Watt| \$19.95 ea



14 Watt Audio **Amplifier** 31806 MI | \$5.95 ea



#### **Solder Stations**

# Visit www.mpja.com for Complete Product Line

#### **General Purpose** Solder Station

15860 TL | \$16.95 ea

Adjustable from 5 to 50 Watt (800 deg. F max) Station provides on-off switch, knob to control wattage, built-in stand, tip cleaning sponge & 1/32" point tip. 115 VAC

For replacement tips and handle visit our website www.mpja.com



#### Temperature Controlled Solder Station

15845 TL | \$48.95 ea

Temperature controlled soldering station with LED display. Heat sensor located near the tip for fast response and +-10 deg. "F" control. Rated at 48Watts, 24Vac handle. Temperature range: 320 deg. "F" to 800 deg. "F". Isolated tip, fused line. 117 VAC. For replacement tips and handle visit our website www.mpja.com



#### Adjustable Soldering Iron 17517 TL | \$12.95 ea



**LED Lighted Soldering** Iron 17516 TL | \$5.95 ea



SMD Hot Tweezer Adapter 15847 TL | \$12.95 ea



For 15845 TI station Only!

Replacement Handle 15846 TL | \$6.95 ea



For 15845 Tl station Only!

Mini Hobby Solder Station

16924 TL | \$12.95 ea



Soldering Iron Kit 16431 TL | \$7.95 ea



**Desoldering Iron** 16922 TL | \$6.95 ea



**Hobby Solder Station** 19154 TL | \$17.95 ea



Adjustable Arm Smoke Absorber

17529 TL \$44.95 ea



**Benchtop Smoke** Absorber



#### **Desoldering Station for Circuit Repair** 19034 TL | \$119.95 ea

Economical desoldering station designed for use with lead free solders. Ergonomic pistol grip Head with trigger for rapid removal of solder. Displays both the Set Point & the Actual Tip temperature. Temp. Range: 160-480Deg. "C" Watts: 80W running/130W cold start heat-up Power: 115VAC/ 60Hz.

Features: Internal vacuum pump, LCD Display, electronic temperature control, PTC Ceramic Heater, Readout in "F" or "C". 3ft. cable/hose length. Includes: 0.8, 1.0 & 1.3mm tips & 3 filter/traps. Replacement parts Available at www.mpja.com



# Hot Air Rework Station 16121 TL | \$99.95 ea

Hot air repair/rework station for SMT devices. Features: a fast heating ceramic heater, internal air supply, stable temperature, comfort grip handle, interchangeable hot air nozzles for PLCC/SOP/ etc. devices. Adj. air flowand temperature. Temperature range: 150 deg.-500deg. "C"

16123-TL QFP 10 X 10 (mm), 16124-TL QFP 14 X 14 (mm),

16122-TL Single 2.5mm Dia.,

16128-TL Single 4mm Dia. Visit www.mpja.com for more nozzles



#### Solder Station 32580 TL | \$59.95 ea



# Solder 60/40 Rosin Core

33593 TL | 1mm | \$9.95 ea 33594 TL | .6mm | \$9.95 ea



# 20041 TL | \$3.95 ea

Mini Solder Sucker



#### Antistatic Solder Sucker 15859 TL | \$6.95 ea



#### 10gm 63/37 Solder 32775 TL | \$1.99 ea



#### DMM, Power Supply and Solder Station 28901 TL | \$125.95 ea

Technician work station with Soldering station, Digital Meter & Adjustable Power Supply. CE listed Includes: Meter Probes, Power supply

clip leads, Soldering Iron stand.





Kit Assortments

260pcs Electrolylic Capacitor Assortment 32531 CR | \$10.95 ea



400pcs Monolythic Ceramic Capacitor Assortment 32534 CM | \$10.95 ea



360pcs TO-92 Transistor Assortment 32376 OT | \$8.95 ea



150pcs Brass Standoff Kit 33401 HD | \$3.95 ea



520pcs 1/4W Resistor Assortment 32037 RS | \$4.95 ea



65pcs Variable Resistor Kit Horizontal Mount



50pcs Variable Resistor Kit Vertical Mount 32358 VR | \$3.95 ea



88pcs Nylon Standoff Kit 33372 HD | \$4.95 ea



2600pcs 1/4W Resistor Assortment 33418 RS | \$14.95 ea



70pcs 16VDC **Electrolylic Capacitor** Assortment



50pcs Variable Resistor Kit Vertical Mount 32809 VR | \$12.95 ea



50pcs Resettable Thermal Fuses Kit 33414 FU | \$5.95 ea



230pcs 2W Resistor Assortment 32763 RS | \$9.95 ea



190pcs Polyester Cap Kit 33416 CR | \$6.95 ea



100pcs Ceramic Capapacitor Kit 33413 CR | \$3.95 ea



50pcs GMA (5X20mm) **Fuse Assortment** 32762 FU | \$4.95 ea



255pcs Diode and Rectifier Assortment 33412 DI | \$6.95 ea



140pcs 1/2W Zener Diode Assortment 33028 DI | \$3.95 ea



70pcs 1W Zener Diode Assortment 33027 DI | \$4.95 ea



6 colors SPST-NO **Pushbutton Button Set** 32728 SW | \$1.95 ea



58pcs Plastic Gear Assortment 32185 HD | \$7.35 da



8pcs 5-24V Positive Voltage Regulators Kit 32375 RG | \$2.95 ea



80pcs 78L Series Positive Voltage Regulator Kit 33417 RG | \$4.95 ea



60pcs 79L Series **Negative Voltage** Regulator Kit

33415 RG | \$4.95 ea



# Selectable OutoutBench Supply

29902 PS | \$16.95 ea

P/N: 9902-PS Input: 90-250VAC 60Hz Outputs: 3,4.5, 6, 7.5,9,12VDC @ 2000mA Selectable Specifications/Features: Enclosed, Benchtop regulated, switching supply. Switch selectable output. Front panel Power switch, Select switch & Binding posts. 6ft. 2 wire input power cord with 2 blade plug.



#### 0-15VDC @ 1A Linear Bench Supply 29319 PS | \$32.00 ea



0-60VDC @ 10A Linear Bench Supply 29960 PS | \$279.95 ea



#### 0-30VDC @ 3A Linear Bench Supply 29601 PS | \$99.95 ea



0-50VDC @ 3A Linear Bench Supply 29612 PS | \$109.95 ea



# Dual 0-30VDC @ 3A Bench Supply

**29623 PS | \$169.95 ea** Input: 110 VAC 60Hz

Outputs: #1: 0-30VDC @ 0-3A #2: 0-30VDC @ 0-3A #3: SVDC @ 3A fixed Dual Constant Voltage or Current supply with 4 LED meters that displays Volts & Amps. Selectable Independent, Series or Parallel operation of Adj. supplies (0-60V/3A or 0-30V/6A). RMS ripple: 20mVp/p (CV) 50mAp/p (CC) Front panel output Binding Posts.Metal case & rubber feet. Internal Temp. controlled fan



#### 0-18Vdc @ 3A Linear Bench Supply

29600 PS | \$64.95 ea Input: 110 VAC 60Hz Output: 0-18VDC @ 0-3A

Constant Voltage or Current
Specifications/Features: True Constant
Current (Can a short) Enclosed Linear bench
supply with dual LCD displays for output
Volts & Amps. .01%+3mV Line /.02%+3mV
Load regulation, <1mV RNS ripple. Front
binding posts. Metal case & rubber feet.
Internal Temp. controlled fan.



# 0-30Vdc @ 3A Switching Bench Supply

29616 PS | \$53.95 ea



0-30VDC @ 5A Switching Bench Supply 29617 PS | \$69.95 ea



# 0-30VDC @ 10A Linear Bench Supply

29604 PS | \$189.95 ea



# 0-30VDC @ 24A Switching Bench Supply



# 0-30VDC @ 10A Switching Bench Supply

29631 PS | \$109.95 ea

Input: 110 VAC 60Hz Output: 0-30VDC, 0-10A

Constant Voltage/Current Specifications/Features: Adjustable Voltage/adjustable Current limit. Enclosed regulated switching bench supply with backlit LCD display for output Volts & Amps. 0.2% +10mV Line/0.2%+5mV Load regulation, <100mV RMS max ripple. Banana jacks output. Internal fan.



# 0-120VDC @ 3A Linear Bench Supply

29313 PS | \$285.95 ea Input: 110 VAC 60Hz

Output: 0-120VDC @ 0-3A

Specifications/Features: Regulated Bench supply with Adjustable Current limit. LED meter displays Volts & Amps. Push button switch connects supply to load. Multi turn Voltage control for precise settings. SmV RMS ripple. Front panel output Binding Posts & Terminal strip for remote Voltmeter Sensing at the load.



## 0-120VDC @ 1A Linear Bench Supply

29312 PS | \$139.95 ea



## 0-30VDC @ 19A Linear Bench Supply

29950 PS | \$289.95 ea



# 0-50VDC @ 30A Linear Bench Supply

29970 PS | \$745.00 ea



Note: Very Heavy Power Supply Must Be Shipped By Motor Carrier (Truck)

# 0-30VDC @ 16A Switching Bench Supply 29316 PS | \$169.95 ea



# 0-30VDC @ 16A Switch- Handheld Adjustable Supply

32577 PS | \$149.95 ea

P/N: PS2002H

Input: 90-265VAC 50/60Hz Output: 0-30VDC @ 50W Limits:3.75A @12V

1.6A @ 30V Handheld switching supply with backlit LCD display and Adjustable Current Limit. Output Oo/Off button, USB Select button, Store & Recall function Button, Adjust Up/Down Buttons. Output Adjustable in 10mV/10mA incraments.



#### **GENERAL SPECIFICATIONS RoHS Compliant**



High reliability line of power supplies designed to operate over the wide range of AC power found world wide.

- · Overvoltage, Overcurrent, **Short Circuit Protected**
- No minimum load UL/CANADA/USA/CE listed.
- 100% Full Load Burn-in Tested Full rated to 50°C

MTBF: 100,000 Hours

Operating Temp. & Humidity: -10° C to +50° C

20%-93% Non Condensing

**Industrial DC Supplies** 

Storage Temp. & Humidity:

-20° C to +85° C

20%-95% Non Condensing

Cooling: Convection

Approvals/Standards: cULus Ref. No.: E22014

Safety: GB4943, UL60950, EN60950 EMC: GB9254, EN55022 class B, EN55024

-3-2/3 EN61000-4-2/3/4/5/6/8/11

Line Regulation (Full Load): < +/- 0.5% Load Regulation: .05% (0-100%) Inrush Current: 20A/115V, 40A/230V Input Leakage Current: <0.7mA @ 230VAC

Output Adjustment Range: +/- 10%

Overload Protection: 40/60W:110-150%-100/150W: 110-130%

Over Voltage Protection: 115-150% Rise Time: 50mS Full Load (Typical) Hold Up Time: 20mS Full Load (typical)

Withstand Voltage (1 Min.):

Input to Output: 3.0KV AC Input to Frame/Ground: 1.5KV AC Output to Frame/Ground: 0.5KV AV

## **15W SUPPLIES**



STOCK #	OUTPUT	PART #
18438-PS	5V/3A	HF15W-SPL-5
18439-PS	12V/1.3A	HF15W-SPL-12
18440-PS	24V/0.6A	HF15W-SPL-24
18441-PS	48V/0.3A	HF15W-SPL-48

Qty: 1-9 \$15.99 ea | Qty: 10-99 \$14.95

# Input: 85-264 VAC 47-63Hz Universal L: 4.0" W: 1.82" H: 1.0" W

#### 25W SUPPLIES



STOCK #	OUTPUT	PART#
17320-PS	3.3V/6A	HF25W-SL-3.3
17321-PS	5V/5A	HF25W-SL-5
17322-PS	12V/2.1A	HF25W-SL-24
17323-PS	15V/1.7A	HF25W-SL-15
17325-PS	48V/0.57A	HF25W-SL-48

Qty: 1-9 \$14.90 ea | Qty: 10-99 \$12.60

Input: 85-264 VAC 47-63Hz Universal W: 3.23" H: 1.38" Wt: .6lb

#### **40W SUPPLIES**



STOCK #	OUTPUT	PART #
16000-PS	5V/8A	HF-40W-SL5
16001-PS	12V/3.5A	HF-40W-SL12
16002-PS	15V/2.8A	HF-40W-SL15
16003-PS	24V/1.8A	HF-40W-SL24
16004-DS	481//0 84	HE-AOM-SLAR

Qty: 1-9 \$16.00 ea | Qty: 10-99 \$15.49

Input: 85-264 VAC 47-63Hz Universal 1:508" W: 3.86" H: 1.57"

#### **60W SUPPLIES**



STOCK #	OUTPUT	PART #	
16005-PS	5V/12A	HF-60W-SL5	
16006-PS	12V/5A	HF-60W-SL12	
16007-PS	15V/4A	HF-60W-SL15	
16008-PS	24V/2.5A	HF-60W-SL24	
16009-PS	48V/1.3A	HF-60W-SL48	

Qty: 1-9 \$19.95 ea | Qty: 10-99 \$18.90

Input: 85-264 VAC 47-63Hz Universal Wt: .1.2lb

#### 100W SUPPLIES



STOCK #	OUTPUT	PART#
16010-PS	3.3V/20A	HF-100W-SF3.3
16011-PS	5V/20A	HF-100W-SF5
16012-PS	7.5V/13.5A	HF-100W-SF7.5
16014-PS	15V/6.7A	HF-100W-SF15
16016-PS	48V/2.2A	HF-100W-SF48
Oty 1-9 \$2	6 50 aa   OI	W 10-99 \$25 60

STOCK #	OUTPUT	PART#
16013-PS	12V/8.5A	HF-100W-SF12
16015-PS	24V/4.5A	HF-100W-SF24

Qty: 1-9 \$21.69 ea | Qty: 10-99 \$18.95 Input Selectable: 85-132 VAC 47-63Hz

170-264 VAC 47-63Hz L: 7.83" W: 3.86" H: 1.54" Wt: 1.5lb

#### 150W SUPPLIES



STOCK #	OUTPUT	PART#
16017-PS	5V/30A	HF-150W-SF5
16018-PS	7.5V/20A	HF-150W-SF7.5
16019-PS	9V/17A	HF-150W-SF9
16033-PS	28V/5.5A	HF-150W-SF28
16034-P5	36V/4.2A	HF-150W-SF36

Oty: 1-9 \$28.60 ea | Oty: 10-99 \$27.95

STOCK #	OUTPUT	PART #
16020-PS	12V/12.5A	HF-150W-SF12
16032-PS	24V/6.5A	HF-150W-SF24

Qty: 1-9 \$26.85 ea | Qty: 10-99 \$23.69 Input Selectable: 85-132 VAC 47-63Hz

170-264 VAC 47-63Hz W: 4.33" H: 1.97"

#### 240W SUPPLIES



STOCK#	OUTPUT	PART#
18434-PS	5V/40A	HF-240W-SF5
18437-PS	48V/5A	HF-240W-SF48
N	F 00 1 0	40 00 ¢20 00

STOCK # PART #

3436-PS	24V/10A	HF-240W-SF24	
v. 1-9 \$3	495 02 1 0	ty: 10-99 \$32 4	į

Input Selectable: 85-132 VAC 47-63Hz 170-264 VAC 47-63Hz W: 4.33" H: 1.97"

#### **MG Chemicals**

Heat Sink Compound, #860, Squeeze Tube MG Chemical



Flux Remover #4140 400gm MG Chemical 30364 MG 400gm | \$13.34 ea



Silicone Conformal Coating, #422 MG Chemical 30366 MG 340gm | 18.95 ea



Visit www.mpja.com for Complete Product Line

Isopropyl Alcohol 99.9%, #824, **Quart Bottle** MG Chemical 30373 MG 1qt | 12.95 ea



Thermal Grease II, #8616, Syringe MG Chemical 30391 MG



**Electrosolve Con**tact Cleaner, #409B MG Chemical 30361 MG 140gm | \$7.75 30362 MG 340gm | \$ 13.34



**Heavy Duty** Flux Remover, #413B MG Chemical 30363 MG 425gm | 17.95 ea



Isopropyl Alcohol Wipe, #824-W MG Chemical 30374 MG 25pkg | 11.45 ea



**Thermal Conductive** Adhesive, 8329TCS, Slow Cure MG Chemical 31968 MG 200ml | \$89.95 ea

Super Cold 134 #403A MG Chemical 30355 MG 185gm | \$10.19 30356 MG 400gm | \$13.87



Contact Cleaner with Silicone. #404B MG Chemical 30357 MG 140gm | \$7.85 30358 MG 340gm | \$12.39

Alcohol Wipes, General purpose, #8241-T. MG Chemical 30375 MG | 8.95 ea



Thermal Conductive Adhesive. #8329TCS, Slow Cure MG Chemical 31967 MG 6ml | \$9.85 ea









Adhesive, Extreme Conductivity #8330S Silver Filled **MG Chemical** 30379 MG 21gm | \$65.00 ea

**Acrylic Conformal** Coating, #419C MG Chemical 30365 MG 340gm | \$17.95 ea



Super Duster 134, #402A MG Chemical 30351 MG 285gm | \$9.51 30352 MG 450gm | \$14.79



Rubber Renue, #408A Bottle MG Chemical 30360 MG 125ml | 7.95 ea



**Thermal Conductive** Adhesive, #8329TCM, **Medium Cure** MG Chemical 31969 MG 6ml | \$9.95 ea

Super Shield, Nickel Coating, #841, MG Chemical 30384 MG 340gm | \$36.95 ea



Super Duster 152. #402B MG Chemical 30353 MG 285gm | \$7.45 30354 MG 400gm | \$9.95

Solder Braid MG Chemical 30369 MG #424 | \$2.85 30370 MG 425 | \$2.95 30371 MG #426 | \$3.15 30372 MG #442 | \$10.95

Adhesive, Conductive #8331, Silver Filled MG Chemical 30380 MG



Red GLPT Varnish, #4228 Bottle MG Chemical 30367 MG 225ml | 24.97 ea



Black Heatshrink Rolls 100' 16334 HS 0.8mm | \$5.95 16335 HS 1mm | \$5.95

Chemicals/Heatshrink

Heat Shrink Assortment, 160Pcs. 4" Black 32258 HS \$11.95 ea



Conductive Grease, #846 Carbon Filled. MG Chemical 30386 MG



Potting Compound, #832C Clear MG Chemical

#832B Black

MG Chemical

375ml | 30.57 ea

30376 MG



1/8" Heat Shrink Assortment, 6in. Long, Color 16831 HS | \$2.25 ea



Heat Shrink Assortment, 4" Long, Color 16843 HS \$11.95 ea

Conductive Ink Pen, #8420-P Silver Filled. MG Chemical 30385 MG 8.5gm | 27.95 ea



Potting Compound,

3/16" Heat Shrink Assortment, 6in. Long, Color 16832 HS | \$2.50 ea

Heat Shrink Assortment, 2-1/2" Long. Black 16835 HS \$10.95 ea

White Lithium Grease, #8461 Squeese Tube, MG Chemical 30387 MG 85ml | 7.15 ea



Potting Compound, #833FRB Flame Retar-



1/4" Heat Shrink Assortment, 6in. Long,



Heat Shrink, Dual Wall Assortment 4" Long 16484 HS \$16.95 ea

Silicone Grease. #8462 Translucent Squeeze Tube MG Chemical 30388 MG



**Total Ground Conduc**tive Carbon #838 Aerosol Can MG Chemical 30383 MG 340gm | 18.95 ea

3/8" Heat Shrink Assortment, 6in. Long, Color 16834 HS | \$2.95 ea



Wiring Accessory Kit 16485 HS | \$16.95 ea



Connector Coat Black, #4229 Bottle MG Chemical

30368 MG 55ml | 14.95 ea Adhesive, Conductive, #8331S, Silver Filled MG Chemical

30381 MG 15GM | 65.00 ea



Heat Shrink Assort-

ment, 6in. Long,

500pc. 4" Cable Ties in 5 Colors 34524 TY | \$4.95 ea



# **Power Supplies**

# Visit www.mpja.com for Complete Product Line

9V @ 16.7Amp Meanwell Supply 18367 PS | \$14.95 ea



12VDC 750mA USED Unreg. Plug Supply Leader 33475 PD | \$2.95 ea



9VDC 1A Adapter **Power Supply Ault** 



Adjustable Boost DC/DC Converter 31397 PS | \$4.95 ea



+5V, +3.3V, +24V & -12V Meanwell Supply



12VDC 2.5A Plug Power Supply Netgear 33380 PS | \$6.95 ea



12VDC 2A Adapter **Power Supply Sino** 



Adjustable Boost DC/DC Converter with Meter 33525 PS | \$7.95 ea



HF320W Hengfu Supply 31340 PS | 5V/60A | \$59.95 ea 31342 PS | 12V/25A | \$59.95 ea



**5VDC 4A Plug Power** Supply Openpeak



12VDC 2.5A Used Adapter Power Supply Leader 30201 PS | \$5.95 ea



Adjustable Buck DC/DC Converter 30148 PS | \$3.95 ea



28V @ 10.8Amp NAO Supply 18927 PS | \$29.95 ea



**5VDC 2A Plug USB Power Supply** 



12VDC 3A Adapter **Power Supply** 34445 PS | \$6.95 ea



Adjustable Buck DC/DC Converter with Meter 30149 PS | \$9.95 ea



15V @ 3Amp Meanwell Supply 31506 PS | \$9.95 ea



**9VDC 1A Power Supply** Kenwood



24VDC 5A Adapter Power Supply Megmeet



Constant Voltage & Current DC/DC Converter 31562 PS | \$4.95 ea



24V @ 2.7Amp SL **Power Supply** 33786 PS | \$9.95 ea



15VDC 900mA Power Supply iConnect 32486 PS | \$2.50 ea



48VDC 2.08A Adapter Supply XP Power 32492 PS | \$18.95 ea



Adjustable DC/DC Regulator





#### **Transformers**

#### **Chassis Mount Transformers**



## Selecting Transformers

Volts & Current listed are nominal RMS. Open circuit and loaded values are different. Type of rectifier/filter circuit will effect secondary & output current and they can be very different.

Full wave center tap choke input filter:
Transformer secondary amps are .7 X required output amps.

Full wave center tap cap input filter:
Transformer secondary amps are 1.2 X required output amps.

For Full wave bridge choke input filter: Transformer secondary amps are = to required output amps

For Full wave bridge cap input filter: Transformer secondary amps are 1.8 X required output amps.

STYLE	INPUT	OUTPUT VOLTS	AMPS	LEADS	DIMN. (L W H)	WT.	
A	110/220VAC	12VAC (6V-0V-6V)	1A	6"	2-3/4" x 1-1/2" x 1-5/8"	.6	\$6.75
Α	110/220VAC	12VAC (6V-0V-6V)	2A	6"	3-1/4" x 2" x 2"	1.3	\$8.95
Α	110/220VAC	12VAC (6V-0V-6V)	4A	6"	4" x 2" x 2-1/4"	1.7	\$15.95
Α	110/220VAC	18VAC (9V-0V-9V)	1A	6"	3" x 2" x 1-3/4"	.8	\$6.95
A	110/220VAC	18VAC (9V-0V-9V)	1.5A	6"	3-1/4" x 2" x 1-7/8"	1.1	\$8.95
Α	110/220VAC	18VAC (9V-0V-9V)	2A	6"	3-1/4" x 2" x 1-7/8"	1.1	\$8.95
A	110/220VAC	24VAC (12V-0V-12V)	2A	6"	3-1/2" x 2-1/4" x 2"	1.4	\$11.95
A	110/220VAC	24VAC (12V-0V-12V)	4A	6"	3-7/8" x 2-1/2" x 2-1/4"	2.3	\$18.95
В	110/220VAC	24VAC (12V-0V-12V)	10A	6"	3-3/4" x 3-5/8" x 3-3/8"	5.5	\$39.95
	A A A A B	A 110/220VAC A 110/220VAC A 110/220VAC A 110/220VAC A 110/220VAC A 110/220VAC B 110/220VAC	A 110/220VAC 12VAC (6V-0V-6V) A 110/220VAC 12VAC (6V-0V-6V) A 110/220VAC 18VAC (9V-0V-9V) A 110/220VAC 18VAC (9V-0V-9V) A 110/220VAC 18VAC (9V-0V-9V) A 110/220VAC 24VAC (12V-0V-12V) A 110/220VAC 24VAC (12V-0V-12V) B 110/220VAC 24VAC (12V-0V-12V)	A 110/220VAC 12VAC (6V-0V-6V) 2A A 110/220VAC 12VAC (6V-0V-6V) 4A A 110/220VAC 18VAC (9V-0V-9V) 1A A 110/220VAC 18VAC (9V-0V-9V) 1.5A A 110/220VAC 18VAC (9V-0V-9V) 2A A 110/220VAC 24VAC (12V-0V-12V) 2A A 110/220VAC 24VAC (12V-0V-12V) 4A B 110/220VAC 24VAC (12V-0V-12V) 10A	A 110/220VAC 12VAC (6V-0V-6V) 1A 6" A 110/220VAC 12VAC (6V-0V-6V) 2A 6" A 110/220VAC 12VAC (6V-0V-6V) 4A 6" A 110/220VAC 18VAC (9V-0V-9V) 1A 6" A 110/220VAC 18VAC (9V-0V-9V) 1.5A 6" A 110/220VAC 18VAC (9V-0V-9V) 2A 6" A 110/220VAC 24VAC (12V-0V-12V) 2A 6" A 110/220VAC 24VAC (12V-0V-12V) 4A 6" B 110/220VAC 24VAC (12V-0V-12V) 10A 6"	A 110/220VAC 12VAC (6V-0V-6V) 1A 6" 2-3/4" x 1-1/2" x 1-5/8" A 110/220VAC 12VAC (6V-0V-6V) 2A 6" 3-1/4" x 2" x 2" A 110/220VAC 12VAC (6V-0V-6V) 4A 6" 3-1/4" x 2" x 2-1/4" A 110/220VAC 18VAC (9V-0V-9V) 1A 6" 3" x 2" x 1-3/4" A 110/220VAC 18VAC (9V-0V-9V) 1.5A 6" 3-1/4" x 2" x 1-7/8" A 110/220VAC 18VAC (9V-0V-9V) 2A 6" 3-1/4" x 2" x 1-7/8" A 110/220VAC 24VAC (12V-0V-12V) 2A 6" 3-1/4" x 2" x 1-7/8" 2" B 110/220VAC 24VAC (12V-0V-12V) 4A 6" 3-7/8" x 2-1/2" x 2-1/4" B 110/220VAC 24VAC (12V-0V-12V) 10A 6" 3-3/4" x 3-5/8" x 3-3/8"	A 110/220VAC 12VAC (6V-0V-6V) 1A 6" 2-3/4" x 1-1/2" x 1-5/8" .6 A 110/220VAC 12VAC (6V-0V-6V) 2A 6" 3-1/4" x 2" x 2" 1.3 A 110/220VAC 12VAC (6V-0V-6V) 4A 6" 4" x 2" x 2-1/4" 1.7 A 110/220VAC 18VAC (9V-0V-9V) 1A 6" 3" x 2" x 1-3/4" .8 A 110/220VAC 18VAC (9V-0V-9V) 1.5A 6" 3-1/4" x 2" x 1-7/8" 1.1 A 110/220VAC 18VAC (9V-0V-9V) 2A 6" 3-1/4" x 2" x 1-7/8" 1.1 A 110/220VAC 24VAC (12V-0V-12V) 2A 6" 3-1/2" x 2-1/4" x 2" 1.4 A 110/220VAC 24VAC (12V-0V-12V) 4A 6" 3-7/8" x 2-1/2" x 2-1/4" 2.3

500VA 0-130VAC Variable Power Transformer

15162 TR \$59.95 ea



**2KVA 0-130VAC** Variable Power **Transformer** 15163 TR \$114.95 ea



Control Transformer 120/220/240/480V 50VA



8/16V, 80VA Transformer HAMMOND 32755 TR \$13.95 ea



LED Driver 3W Output 85-265VAC Input 31536 PS | \$1.95 ea



**LED Driver 10W Output** 90-264VAC Input 32817 PS | \$3.95 ea



**LED Driver 20W Output** 110-260VAC Input 31538 PS | \$5.95 ea



**LED Driver 30W Output** 110-260VAC Input



**LED Driver 3W Output** 



**LED Driver 10W Output** 12-24VAC/DC Input 31557 PS | \$3.95 ea

**LED Driver 20W Output** 12-24VDC Input 31558 PS | \$8.95 ea



**LED Driver 30W Output** 12-24VDC Input

31559 PS | \$8.95 ea



Sealed Lead Acid Recargable Battries

17280 BT | 6V 4Amp | \$7.95 ea 14817 BT | 6V 8Amp | \$19.95 ea 14819 BT | 12V 7Amp| \$22.95 ea



Thermoelectric Cooling Module 63 couple 12VDC 34134 PM | \$4.95 ea



Thermoelectric Cooling Module 127 couple 12VDC 30207 PM | \$4.98 ea



**Peltier Cooling** Assembly, 12VDCut

15312 PM | \$29.95 ea



## LEDs/Indicators

# Visit www.mpja.com for Complete Product Line

#### 12Vdc 5 Meter Roll LEDs

19434 OP | Cool White | \$12.95 ea 33111 OP | Med. White | \$12.95 ea 31362 OP | Red | \$12.95 ea 19441 OP | Blue | \$12.95 ea

Water proof IP65 PVC encapsulated roll with wire pigtails for connection.



#### **Bulk Pack LEDs** 100 per pack

15101 OP | 3mm Red | \$1.95 ea 15102 OP | 3mm Green | \$1.95 ea 15103 OP | 3mm Yellow | \$1.95 ea 15104 OP | 3mm Blue | \$2.95 ea 15108 OP | 5mm Red | \$1.95 ea 15307 OP | 5mm White | \$2.95 ea 15308 OP | 5mm Green | \$1.95 ea 15309 OP | 5mm Yellow | \$1.95 ea 31363 OP | 5mm Blue | \$3.95 ea



31515 OP | Red | \$3.95 ea 31516 OP | Green | \$3.95 ea 31517 OP | Blue | \$2.95 ea 31183 OP | Warm White | \$2.95 ea 31518 OP | RGB | \$3.95 ea

Requires heatsink and current control power supply!



#### **3VDC Mini LASER Head** 635nm <5mw

19566 LZ | \$2.25 ea



#### 5 Meter Roll RGB LED, Controller and Supply

31541 OP | \$19.95 ea PVC encapsulated roll, controller not water proof



#### **High Lumen Cool** White LEDs

31325 OP | 10 Watt | \$2.95 ea 31326 OP | 20 Watt | \$7.95 ea 31327 OP | 30 Watt | \$9.95 ea

heatsink and current control power supply!



#### **5VDC LASER Diode** Red Crosshair Pattern <5mw 33029 LZ | \$2.95 ea



# 12VDC 5 Meter Cool White LED Roll

31192 OP | \$9.95 ea



# **Assortment Pack LEDs** 100 per pack

32674 OP | 3mm | \$2.95 ea 32066 OP | 5mm | \$2.95 ea

20 pieces each of: Red, Yellow, Green, Blue and white leds.

#### 10 Watt Infrared LEDs

32621 OP | 730nM | \$22.95 ea 32622 OP | 850nM | \$10.95 ea 32623 OP | 940nM | \$9.95 ea Requires

heatsink and current control power supply!

## 12VDC Bi-Pin G-4 LED Modules

33410 OP | Warm White | \$1.95 ea 33411 OP | Cool White | \$1.95 ea



#### 12VDC 72 Lumen Cool White 20 Module Strig 19438 OP | \$14.95 ea



# Flashing RGB 5mm LEDs Pack of 100 32889 OP | \$4.95 ea



#### 10 Watt **Ultraviolet LEDs**

32614 OP | 365-367nM | \$49.95 ea 32616 OP | 385-390nM | \$14.95 ea 32617 OP 395-400nM \$14.95 ea 32618 OP 410-415nM \$10.95 ea 32619 OP 420-430nM \$9.95 ea

Requires heatsink and current control power supply!



White MR-16 LED

12V AC/DC 3Watt Cool

# 12VDC 36 Lumen Cool White 20 Module Strig

31366 OP | \$12.95 ea



#### 10 Segment LED Bargraph

32253 OP | Red | \$1.75ea 32325 OP | Blue | \$1.75ea 32326 OP | Green | \$1.75ea 32327 OP | Yellow | \$1.75ea



#### 10mm Super Bright **Cool White LED** 15000mcd

15415 OP | \$0.15 ea Current limiting resistor required



# Indicators 32750 LA | Red | \$2.49 ea 32751 LA | Green | \$2.49 ea

12V AC/DC LED

32752 LA | Blue | \$2.49 ea



#### 12VDC Cool White Piranah LED boards

32035 OP | 3 x 8 LEDs | \$4.95 ea 33081 OP | 3 x 16 LEDs | \$9.95 ea 33070 OP | 6 x 8 LEDs | \$9.95 ea



# 12VDC 5mm LED Lamps

30124 LA | Red | \$0.75ea 30125 LA | Green | \$0.75ea 30126 LA | Yellow | \$0.75ea 30127 LA | Blue | \$0.75ea 30128 LA | White | \$0.75ea



## 50 LEDs in a 5 Meter String

31985 OP | Cool White| \$5.95ea 31986 OP | Red | \$5.95ea 31987 OP | Blue | \$5.95ea 31984 OP | RGB Flashing | \$9.95ea



# 12V AC/DC 22mm LED Indicators

31087 LE | Red | \$2.95 ea 31088 LE | Green | \$2.95 ea 31089 LE | Yellow | \$2.95 ea



#### Solid State Relay

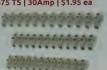
31931 RL | 10 Amp | \$5.95 ea 31932 RL | 25 Amp | \$8.95 ea 31933 RL | 40 Amp | \$10.95 ea

DC-AC 3-32VDC control voltage. 24-480VAC output voltage SPST-NO AC only



#### 12 Position Euro Block

32940 TS | 10Amp | \$1.75 ea 32941 TS | 20Amp | \$1.85 ea 32675 TS | 30Amp | \$1.95 ea



#### Threaded locking connector pair

32420 PL | 2 Pin | \$1.95 ea 32421 PL | 3 Pin | \$1.95 ea 32423 PL | 5 Pin | \$1.95 ea 32426 PL | 8 Pin | \$1.95 ea



Snap locking

connector pair

32567 PL | 2 Pin | \$2.89 ea 32568 PL | 3 Pin | \$2.89 ea 32569 PL | 4 Pin | \$2.89 ea 32570 PL | 5 Pin | \$2.89 ea

Miscellaneous

Ul Hook-Up Wire



Handy spool of 100ft. General Purpose 300 Volt, 105Deg. "C", UL 1007/1569 Copper conductor Hook-up wire.

SOLID 2	WT: .4	
STOCK #	DESC.	1EA
32270-WI	Solid Red	\$8.95
32271-WI	Solid Black	\$8.95
32272-WI	Solid Yellow	\$8.95
32273-WI	Solid Blue	\$8.95
32274-WI	Solid White	\$8.95
32275-WI	Solid Green	\$8.95
STRAND	ED 22AWG	WT: .4

32212-WI	Solid rellow	\$8.95
32273-WI	Solid Blue	\$8.95
32274-WI	Solid White	\$8.95
32275-WI	Solid Green	\$8.95
STRAND	ED 22AWG	WT: .4
STOCK #	DESC.	
32280-WI	Stranded Red	\$8.95
32281-WI	Stranded Black	\$8.95
32282-WI	Stranded Yellow	\$8.95
32283-WI	Stranded Blue	\$8.95
32284-WI	Stranded White	\$8.95
200051.11	Ct 1 1 C	4

	32280-WI	Stranded Red	\$8.95						
	32281-WI	Stranded Black	\$8.95						
	32282-WI	Stranded Yellow	\$8.95						
	32283-WI	Stranded Blue	\$8.95						
	32284-WI	Stranded White	\$8.95						
	32285-WI	Stranded Green	\$8.95						
		ED 18AWG	WT:.						
	STOCK	DED 18AWG	WI:.						
	STOCK #	DESC.	1EA						
	32290-WI	Stranded Red	1EA \$12.9						
	32290-WI 32291-WI	Stranded Red Stranded Black	1EA \$12.9 \$12.9						
	32290-WI 32291-WI 32292-WI	Stranded Red Stranded Black Stranded Yellow	\$12.9 \$12.9 \$12.9 \$12.9						

# Solid State Relay

**Solid State Relay** 

33984 RL | 10 Amp | \$6.95 ea 33985 RL | 25 Amp | \$8.95 ea 33986 RL | 40 Amp | \$11.95 ea

33980 RL | 10 Amp | \$6.95 ea 33981 RL | 25 Amp | \$9.95 ea 33932 RL | 40 Amp | \$11.95 ea

DC-DC 3-32VDC control voltage. 5-60VDC output voltage SPST-NO DC only

AC-AC 80-280VAC control voltage. 24-480VAC output voltage SPST-NO AC only



## Heat Sink for Solid State Relav 32434 HK | \$4.95 ea



# 200Amp Binding Posts Red & Black Pair



#### Heat Sink for Solid State Relay 32052 HK | \$3.95 ea



PC Mount Terminal Strip | DPDT DIP Relay

32555 RL | 3VDC | \$1.29 ea 32556 RL | 5VDC | \$1.29 ea 32558 RL | 9VDC | \$1.29 ea 32559 RL | 12VDC | \$1.29 ea 32560 RL | 24VDC | \$1.29 ea

HK19F Series DC relays contacts rated 1A/125VAC or 2A/30VDC



#### Adjustable 3 Axis Stage 33383 MI | \$169.95 ea



#### Solid 22Awg hook Up Wire Set

32267 WI | \$15.95 ea 6 colors 25' each spool

32295-WI Stranded Green



Stranded 22Awg hook

#### 5.5mm Power Jacks 32104 PL | 5.5/2.1mm | \$1.49 ea

18318 TS | 2 Position | \$0.39 ea 18319 TS | 3 Position | \$0.49 ea 5mm spacing end stackable

32105 PL | 5.5/2.5mm | \$1.49 ea Metal Chassis mount connector with



#### 5-7/8" x 2-3/4" x 1-7/16" Aluminum Heat Sink 32088 HK | \$12.95 ea

2 Axis X/Y Stage 33402 MI | \$139.95 ea



32269 WI | \$15.95 ea 6 colors 25' each spool

Up Wire Set



# 5.5mm Power Adaptors

19452 PL | 2.1mm Plug | \$0.89 ea 19453 Pt. | 2.5mm Plug | \$0.89 ea 19454 PL | .... m Jack | \$0.89 ea 19405 PL | 2.5mm Jack | \$0.89 ea mount wave leads to coaxial/barrel : "wer connectors Screw terminals to



#### 10" x 7" x 2" Aluminum Heat Sink 33305 HK | \$23.95 ea



#### 15-3/4" X 7-13/16" X 2" Aluminum Heat Sink 33306 HK | \$59.95 ea



#### 30AWG Wire Wrap Spools

33125 WI | Red | \$7.95 ea 33126 WI | Black | \$7.95 ea 33129 WI | Green | \$7.95 ea



#### THERMOCOOL AC FANS **UL/TUV/CE RoHS Compliant**



















STOCKH         FIG.         P/N           17771-FN         A         G8025HA           17772-FN         B         G8038HA           17773-FN         C         G9225HA	AS 3-1/8" SQ X 1-1/2		23 28	30 33	SLV.	WIRE	.6	16A \$9.95	12+ca \$8.95
17772-FN B G8038HA 17773-FN C G9225HA	AS 3-1/8" SQ X 1-1/2	2" 125AC/.14						\$9.95	\$8.95
17773-FN C G9225HA			28	33	CIN				
	AS 3-5/8" SQ X 1"	12EAC/14			SLV.	WIRE	.6	\$14.95	\$12.95
		123AC/.14	34	40	SLV.	TERM	.5 '	\$9.95	\$8.95
17774-FN D G12025H	AS 4-11/16" SQ X 1"	" 125AC/.20	66	42	SLV.	TERM	.75	\$9.95	\$8.95
17775-FN E G12038H	AS 4-11/16" SQ X 1-1/	/2" 125AC/.28	95	48	SLV.	TERM	1.1	\$12.95	\$10.95
17776-FN E G12038M	AB 4-11/16" SQ X 1-1/	/2" 125AC/.22	85	44	BALL	TERM	1	\$15.95	\$12.95
17777-FN E G12038M	AS 4-11/16" SQ X 1-1/	/2" 125AC/.22	85	44	SLV.	TERM	1.1	\$11.95	\$9.95
17778-FN F G13538H	AS 5-5/16" SQ X 1-1/2	2" 125AC/.34	122	53	SLV	WIRE	1.2	\$14.95	\$12.95
17779-FN G G15050H	AS 6" SQ X 2"	125AC/.40	198	58	SLV	WIRE	1.9	\$22.95	\$19.95
17780-FN H G17050HA	SB 6-3/4" RND X 2"	125AC/.40	198	59	BALL	TERM	1.8	\$22.95	\$19.95
17781-FN I G17050HA	AST 6-3/4" X 6 X 2"	125AC/.40	198	59	BALL	TERM	1.9	\$22.95	\$19.95

#### **FAN GUARDS**

**PICTURES ARE** REPRESENTIVE OF THE STYLE AND MAY NOT BE EXACT.









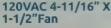




		Α	В	D	E	F	G		
STOCK#	FIG	FAN SIZE	STYLE	MOUNTING	MAT	FINISH	WT.	1EA	10+EA
18383-FN	Α	1-9/16"/40MM	OFFSET	4 CORNERS	STEEL	CHROME	.01	\$0.99	\$0.89
18384-FN	В	2-3/8"/60MM	OFFSET	4 CORNERS	STEEL	CHROME	.03	\$0.99	\$0.89
18386-FN	D	3-1/8"/80MM	OFFSET	4 CORNERS	STEEL	CHROME	.04	\$1.25	\$0.99
18387-FN	E	3-5/8"/90MM	OFFSET	4 CORNERS	STEEL	CHROME	.05	\$1.25	\$0.99
18388-FN	F	4-11/16"/120MM	OFFSET	4 CORNERS	STEEL	CHROME	.08	\$1.39	\$1.25
17815-FN	G	5" /127MM	OFFSET	4 CORNERS	STEEL	CHROME	.13	\$0.49	\$0.49

#### 120VAC 6-3/4" Fan 31876 FN | \$22.95 ea





33012 FN | \$8.95 ea 120mm X 38mm



120VAC 3-1/2" x 1-1/2"Fan

33010 FN | \$7.95 ea 80mm X 38mm



230VAC 3-1/2" X 1-1/2" Fan

33489 FN | \$5.95 ea 80mm X 38mm



Plastic Guard & Filter 33403 FN | 80mm | \$1.79 ea 33404 FN | 120mm | \$1.95 ea



Louvered Fan Guard with Dust Filter for 4-11/16" (120mm) Fan

33406 FN \$3.95 ea



Cabinet Vent with Dust Filter and Bracket

33405 FN \$9.95 ea



4 plugs 27" Fan Cord 30347 FN | \$1.95 ea



5Vdc 2-3/8" X 1"Fan

33704 FN | \$2.95 ea 60mm X 25mm



#### 5VDC 1-9/16" X 3/8"Fan 34466 FN | \$2.95 ea

40mm X 10.5mm



# 5VDC 1-9/16" X 3/8"Fan

31854 FN | \$2.95 ea 40mm X 10mm



5Vdc 1-9/16" X 1/2" Fan

**31414 FN | \$1.95 ea** 40mm X 13mm







12VDC 2"X 3/8" T&T Fan 50mm X 10mm 12773 FN | \$1.65 ea



12VDC 2-3/8" X 1" Boxer Fan 60mm X 25mm 33482 FN | \$2.95 ea



12VDC, 3-1/8" X 1" Delta Fan 80mm X 25mm 18842 FN | \$4.95 ea

With IDE Power Connector

12VDC 3-5/8" X 1" NMB Fan 90mm X 25mm 33484 FN | \$1.49 ea



12VDC 4-11/16" X 1-1/2" Fan 120mm X 38mm 33923 FN | \$8.95 ea



24VDC 1-9/16" X 3/4" Sunon Fall 40mm X 20mm 1 1785 FR | 5. " #2



12VDC 1-1/2" X 1-1/8" Delta Fan 38mm X 28mm 33157 FN | \$4.95 ea



12VDC, 2-3/8" X 1" Jamicon Fan 60mm X 25mm 17526 FN | \$2.95 ea



12VDC 3-1/8" X 1" NMB Fan 80mm X 25mm 33480 FN | \$2.49 ea



12VDC 3-5/8" X 1" Panaflo Fan 90mm X 25mm 19238 FN | \$1.95 ea



12VDC Fan & Heatsink 17045 HK | \$4.95 ea 60mm X 80mm X 64mm



24VDC 2-3/8" X 13/16" Fan Globe 60mm X 20mm 33483 FN | \$1.95 ea



12VDC 2-3/8" X 3/4" Delta Fan 60mm X 20mm 32786 FN | \$2.95 ea



12VDC 2-3/4" X 3/4" AVC Fan 70mm X 20mm



12VDC 3-1/8" X 1" Box NMB Fan 80mm X 25mm 33820 FN | \$2.95 ea



12VDC 4-11/16" X 1" Sunon Fan 120mm X 25mm 32610 FN | \$4.95 ea



12VDC Fan & Heatsink 33477 HK | \$19.95 ea 50mm X 50mm X 30mm



24VDC 4-11/16" X 1" Fan 125mm X 25mm 32921 FN | \$5.95 ea



Fans

12VDC 2-3/8" X 1" Mitsubishi Fan 60mm x 25mm 19389 FN | \$1.95 ea



12VDC 3-1/8" X 1" NMB Fan 80mm X 25mm 32685 FN | \$5.95 ea



12VDC 3-5/8" X 11/16" Fan 92mm X 25mm 19387 FN | \$5.95 ea



12VDC 4-11/16" X 1" Sunon Fan 120mm X 25mm 31203 FN | \$4.95 ea



12VDC Fan & Heatsink 31838 HK | \$3.95 ea



24VDC, 6-3/4"X 2" Axial Fan 171mm X 51mm 33259 FN | \$24.95 ea



## Proto/Breadboards

#### Solderless Breadboards









Visit www.mpja.com for Complete Product Line

65 Piece Breadboard Jumper Pin Set 30116 PL | \$3.95 ea



White ABS plastic body (except G clear), B, C & E come with metal mounting base. Nickel plated phosphor bronze contacts.

Contact resistance less than 1 milliohm @ 1kHz. Tested for over 10,000 cycles. Snap lock molded dovetail for combining multiple boards, Suitable for 19-29 AWG wire & all DIP size components. Please visit our web site for more detailed information.

STOCK #	FIG.	DESC.	SIZE L X W	WT.	1EA	10+EA
24443-TE	Α	830 point	6-1/2" X 2-1/8"	.3	\$4.95	\$3.95
24444-TE	В	830 point 3 Binding Post and Jumper Kit	7-7/8" X 4-1/8"	.8	\$9.95	\$8.95
24445-TE	С	1660 point 3 Binding Post and Jumper Kit	8-3/8" X 5-1/8"	.9	\$12.95	\$12.45
24447-TE	E	3220 point 4 Binding Post and Jumper Kit	10-3/8" X 9-1/8"	2	\$22.95	\$21.95
27027-TE	F	140 Piece 22 AWG Jumper Wire KIt		.3	\$3.95	\$3.49
18103-TE	G	830 point Clear ABS Body	6-1/2" X 2-1/8"	.3	\$4.95	\$3.95

## 40pc Header Jumper

30117 PL | F to F | \$3.95 ea 31217 PL | M to M | \$3.95 ea 31218 PL | M to F | \$2.72 ea M = Male F = Female



#### Powered Breadboard 32920 TE | \$99.95 ea

**Powered Breadboard** 

Proto Board Special

33353 MI | \$6.95 ea

5 pieces of 170 tie point breadboard

and 5 pieces of 170 tie point proto

230 Tie Point Mini

Unmounted

18862 TE | \$2.95 ea

Solderless Breadboard.

board for one low price.

30176 TE | \$10.95 ea



8 Pin SOP Adapter Board Double Sided

31456 PB | \$0.59 ea





10 Pin SOP Adapter Board Double Sided

31457 PB | \$0.59 ea





14 Pin SOP Adapter Board Double Sided 31864 PB | \$0.69 ea





16 Pin SOP Adapter Board Double Sided 31459 PB | \$0.69 ea





20 Pin SOP Adapter Board Double Sided 31460 PB | \$0.69 ea





#### 20 pin IC Proto Board 32540 PB | \$1.00 ea

Single Sided .062" phenolic board,

#### ProtoBoard Set of 4 32065 PB | \$2.95 set

**32065 PB | \$2.95 set** FR-4 boards with 0.1" spacing. One each of thr following: 30123 PB, 31091 PB, 31169 PB and 31253 PB.



#### Proto Board

32891 PB | 170 holes | \$1.00 ea 32892 PB | 276 holes | \$1.95 ea 32893 PB | 830 holes | \$4.95 ea Based on the breadboard pattern



# 24 Pin SOP Adapter Board Double Sided

31461 PB | \$0.99 ea



#### 28 Pin SOP Adapter Board Double Sided 31462 PB | \$0.89 ea



#### FR-4 Proto Board

Doudle sided, .1" pad spacing, Plated thru copper pads. Sold Individually

30123 PB | 2cm X 8cm | \$0.99 ea 31091 PB | 4cm X 6cm | \$1.29 ea 31253 PB | 3cm X 7cm | \$1.19 ea 31169 PB | 5cm X 7cm | \$1.79 ea 32011 PB | 8cm X 12cm | \$4.95 ea 32012 PB | 9cm X 15cm | \$5.95 ea 32013 PB | 15cm X 20cm | \$9.95 ea 32014 PB | 20cm X 30cm | \$19.95 ea

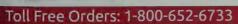


#### **Phenolic Proto Board**

Single sided, .1" pad spacing, unplated copper pads. Sold Individually

15918 PB | 44mm X 39mm | \$0.59 ea 16227 PB | 60mm X 50mm | \$0.79 ea 15914 PB | 82mm X 64mm | \$1.10 ea 15912 PB | 110mm X 80mm | \$1.75 ea





# Step Motors

#### 1.8 Deg STEP MOTORS



Note: \* Indicated Step Motor has a DUAL SHAFT. Additional Information Avaliable On our website

STOCK	FIG.	NEMA	VDC	A	W	HLD, TORQ.	P/N	TYPE	LENGTH (BODY)	SHAFT		
18735-MS	Α	17	5.2V	.5	10.5	1.5Kg/cm	42BHH34-050A-18	6 lead	1-3/8"	5 X 17mm	.5	\$9.95
18733-MS	Α	17	12V	.31	38	1.6Kg/cm	42BHH34-031A-18G	6 lead	1-3/8"	5 X 17mm/flat	.5	\$9.95
17453-MS	Α	17	5.2V	1	5.2	3.2Kg/cm	42BHH48-100E-24	6 lead	2"	5 X 22mm	.84	\$15.95
18734-MS	Α	17	12V	.4	30	3.2Kg/cm	42BHH48W-040B-24	6 lead	1-7/8"	5 X 22mm	.76	\$10.95
18686-MS	В	23	2.8V	2	1.4	4.2Kg/cm	57BHH41-200B-21	6 lead	1-5/8"	6.35 X19mm	1	\$17.95
17454-MS	В	23	24V	.34	71	4.4Kg/cm	57BHH41-034A-21	6 lead	1-5/8"	6.35 X19mm	1	\$17.95
17455-MS	C	23	6.2V	1	6.2	9Kg/cm	57BHH56-10D-21N	6 lead	2-3/8"	6.35 X19mm	1.6	\$14.95
18728-MS	C*	23	6.2V	1	6.2	9Kg/cm	57BHH56-10D-21DH	6 lead	2-3/8"	6.35 X20mm/Dual	1.6	\$15.95
18189-M5	D	23	· 5.7V	2.3	2.5	16Kg/cm	57BHH76-200B-25C	6 lead	3" "	6.35 X25mm	2.3	\$23.95
18729-MS	D*	23	5.7V	2.3	2.5	16Kg/cm	57BHH76-200B-26DA	6 lead	3"	6.35 X24mm/Dual	2.4	\$23.95
18687-MS	D	23	4.5V	2.5	1.8	18Kg/cm	57BHH76-250E-21G	6 lead	3"	6.35 X25mm	3.4	\$24.95
17456-MS	Е	23	3.6V	3	1.2	21Kg/cm	57BHH82-300E-21U	6 lead	3-1/4"	6.35 X19mm	2.6	\$34.95
17458-MS	F	34	3.0V	3	1	23Kg/cm	86BHH76-400C-35	6 lead	3"	13 X35mm	4.7	\$54.95
18190-MS	G	34	6.0VDC	2	3	48Kg/cm	86BHH114-200C-37BS	8 lead	4-17/32"	13 X35mm	8.1	\$68.00
17457-MS	н	34	7.8VDC	2	3.9	63Kg/cm	86BHH150-200A-37BS	8 lead	6"	13 X35mm	- 11	\$79.95

#### 3A Step Motor Driver 31306 MS | \$14.95 ea



3.5A Step Motor Driver

1.5A Step Motor Driver 18187 MS | \$54.90 ea Free Power Supply



**AC Powered Step Motor** Driver 18727 MS | \$169.95 ea



**6A Step Motor Driver** 18188 MS | \$96.00 ea



**4A Step Motor Driver** 

32381 MS | \$17.95 ea

5A Step # otor Driver 1 5 15 ea





Linear Drive Belt Kit 32387 MI | \$8.95 ea



## Flexible Helical Cut Coupler



33601 HD | 3mm to 6mm | \$3.95 ea 33602 HD | 3mm to 1/4" | \$3.95 ea 33603 HD | 4mm to 5mm | \$3.95 ea 33604 HD | 4mm to 6mm | \$3.95 ea 33605 HD | 4mm to 1/4" | \$3.95 ea 33606 HD | 4mm to 8mm | \$3.95 ea 33607 HD | 4mm to 10mm | \$3.95 ea 33608 HD | 5mm to 6mm | \$3.95 ea 33609 HD | 5mm to 1/4" | \$3.95 ea 33610 HD | 5mm to 8mm | \$3.95 ea 33611 HD | 6mm to 6mm | \$3.95 ea 33612 HD | 6mm to 1/4" | \$3.95 ea 33613 HD | 6mm to 8mm | \$3.95 ea 33614 HD | 6mm to 10mm | \$3.95 ea 33615 HD | 1/4" to1/4" | \$3.95 ea 33617 HD | 1/4" to 8mm | \$3.95 ea 33619 HD | 7mm to 7mm | \$3.95 ea 33620 HD | 7mm to 8mm | \$3.95 ea 33621 HD | 8mm to 8mm | \$3.95 ea 33622 HD | 8mm to 10mm | \$3.95 ea 33623 HD | 10mm to 10mm | \$3.95 ea

#### Step Motor Bracket

32431 MS | Nema 17 | \$4.95 ea 32379 MS | Nema 23 | \$4.95 ea 32432 MS | Nema 34 | \$8.95 ea



# Rigid Shaft Coupler

33557 HD | 5mm to 5mm | \$2.95 ea 33560 HD | 5mm to 8mm | \$2.95 ea



## 300mm Leadscrew Step Motor

33515 MS | \$29.95 ea



#### 100mm Leadscrew Step Motor 31564 MS | \$29.95 ea



350mm Leadscrew Kit 32396 HD | \$19.95 ea



# **Step Motors**

# Visit www.mpja.com for Complete Product Line

# 2.7V 1.8 Deg NEMA 23 Step Motor



**3V 1.8 Deg NEMA 23** Step Motor



**9V 1.8 Deg NEMA 23** Step Motor



**3V 1.8 Deg NEMA 23** Step Motor



2.5V 1.8 Deg NEMA 23 Step Motor



5.3V 1.8 Deg NEMA 23 **Gear Head Step Motor** 17461 MS

\$7.45 ea 5 Wire Leads



**USED 24V 1.8 Deg NEMA 23 Step Motor** 



3.84V 1.8 Deg NEMA



10.4V 1.8 Deg NEMA 17 Step Motor



10.4V 1.8 Deg NEMA 17 Step Motor



10.4V 1.8 Deg NEMA 17 Step Motor



10.4V 1.8 Deg NEMA 17 Step Motor



3.5V 3.75 Deg NEMA 17 Step Motor



**5V Leadscrew Micro** Step Motor





12V 1.8 Deg NEMA 14 Step Motor



12V 1.8 Deg NEMA 14 Step Motor



24V 3.6 Deg NEMA 17 Step Motor



56V Gearhead Step Motor



2.66V .1 Deg NEMA 11 Step Motor



1.8 Deg NEMA 17 Step Motor





24V 3.6 Deg NEMA 17 Step Motor



12V 3.75 Deg **Step Motor** 31393 MS | \$1.95 ea



USED 3V 7.5 Deg Step Motor



24V 7.5 Deg Step Motor

18368 MS | \$1.95 ea 5 Wire Leads



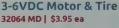


12VDC Gear Motor 37 mm dia X 51mm long motor plus 6mm dia. X 14mm shaft, bronze bearings. Six M3x0.5 mounting holes in front. Solder terminals

32203 MD | 5 RPM | \$12.95 ea 32204 MD | 30 RPM | \$12.95 ea 32205 MD | 50 RPM | \$12.95 ea 32206 MD | 100RPM | \$12.95 ea

#### 37mm Motor Bracket 33574 MD | \$3.95 ea







12VDC ACME Gear Motor 32575 MD | \$19.95 ea



Head Motor

32681 MD | \$19.95 ea

24VDC Leadscrew Gear

24VDC Gear Head Motor 32684 MD | \$19.95 ea



12-80VDC 20Amp Max **Motor Speed Control** 33377 MD | \$15.95 ea

Motors/Controllers

6-24VDC 20Amp Max

**Motor Speed Control** 

31566 MD \$8.95 ea



12VDC Gear Motor 17 mm dia X 45mm long motor plus

3mm dia. X 8mm shaft, bronze bearings. Two M2x0.4 mounting holes in front. Solder terminals

32208 MD | 25 RPM | \$12.95 ea 32209 MD | 55 RPM| \$12.95 ea

4.5VDC 140RPM Gearmotor 19285 MD | \$9.95 ea



MG995 Servo Motor 31150 MP | \$7.95 ea



36VDC Gear Head Motor 31474 MD | \$12.95 ea



**Motor Speed Control** with Reversing Switch



SG90 Servo Motor 31002 MD | \$5.95 ea



12VDC 7000 RPM Mini Motor 32417 MD | \$12.95 ea



**6VDC Gear Head Motor** 32176 MD | \$34.95 ea



**6VDC Mini Motor** 34439 MD | \$1.75 ea



**USED 24VDC 45 RPM** Gear Head Motor with Wheel 17971 MD \$9.95 ea



8-16VDC Mini Motor 18298 MD | \$0.99 ea



6.5-20VDC 10Amp Max Motor Speed Control 33371 MD | \$8.95 ea



ibrator 18115 @D | \$1.95 ea



**USED 24VDC 45 RPM** Gear Head Motor 32172 MD | \$9.95 ea



Motor Speed Control with Display 32673 MD



6-28VDC 2Amp Max **Motor Speed Control** with Memory 32826 MD



#### Die Cast Aluminum Boxes

Aluminum alloy with cover & M3.5 stainless steel screws included. Internal guides on ends & sides for holding PC boards, Natural Bare Aluminum Finish. Listed below are the outside dimensions.



				* Committee of the Comm	- Contraction
STOCK#	L"	W"	H"	WT.	1EA
16281 BX	2.36"	2.17"	1.18"	.18	\$3.95
16282 BX	3.15"	2.17"	0.98"	.2	\$4.25
16283 BX	3.50"	1.37"	1.18"	.16	\$3.95
16284 BX	4.49"	2.52"	1.18"	.28	\$5.95
16285 BX	4.49"	2.52"	2.17"	.36	\$7.49
16286 BX	4.49"	3.50"	2.17"	.50	\$9.25
16287 BX	4.72"	3.94"	1.38"	.56	\$8.95
16288 BX	5.51"	3.94"	2.95"	.86	\$13.85
16289 BX	6.50"	5.00"	2.95"	1.12	\$18.55
16290 BX	6.73"	4.76"	2.17"	.96	\$17.51
16291 BX	6.73"	4.76"	4.17"	1.40	\$19.95
16292 BX	8.74"	5.75"	2.17"	1.44	\$22.91
16293 BX	8.74"	5.75"	4.17"	2.80	\$28.71
16294 BX	9.84"	9.84"	3.94"	3.50	\$51.88
16295 BX	10.83"	6.89"	2.56"	2.08	\$32.91

#### Sealed Plastic Boxes

Gray ABS plastic project boxes with lids. Tongue & grove sealing meet IP-65 & NEMA 4 requirements. 4 standoffs on base for holding PC boards. Includes stainless cover screws & neoprene gasket material. 17391, 17400-17407 NO Internal Guides Listed below are the outside dimensions



			300	- Charles	
STOCK#	L"	W"	H"	WT.	1EA
17392 BX	4.53"	3.54"	2.17"	.35	\$6.95
17393 BX	6.73"	4.76"	2.17"	.54	\$9.95
17395 BX	6.73"	4.76"	3.15"	.73	\$12.95
17396 BX	7.68"	3.15"	2.17"	.49	\$8.95
17398 BX	10.43"	7.28"	3.74"	1.5	\$24.95
17399 BX	2.05"	1.97"	1.38"	.09	\$3.95
17402 BX	7.87"	4.72"	2.95"	.8	\$14.95
17405 BX	9.45"	6.3"	4.72"	1.5	\$20.95
17406 BX	11.81"	9.06"	4.37"	2.4	\$35.95
17407 BX	14.17"	7.87"	5.91"	3.1	\$33.95

#### 19" Plastic Rack Mount Cabinets

Black plastic rack mount clamshell cases. Vented sides with removable front & rear panels. Internal standoffs on top & bottom. Assembly required. NOTE: Not Available For Air Shipments. Measurements below are for Internal Space



STOCK #	DESC	W"	D"	H"	WT.	1EA
17086 BX	10	16-3/16"	7-11/16"	1"	1.9	\$24.95
17087 BX	2U	16-3/16"	7-11/16"	2-7/8"	2.5	\$34.95
17088 BX	3U	16-3/16"	7-11/16"	4-1/2"	3.0	\$39.95

# 19" Metal Rack Mount

19in. rack mount cases. 1/8in. Aluminum Front Panel with steel chassis & covers. Satin black textured paint. NOTE: Not Available For Air **Shipments** 



STOCK #	DESC	W"	D"	H"	WT.	1EA
17811 BX	10	19"	11.8"	1.75"	1.9	\$34.95
17812 BX	2U	19"	11.9"	3.5"	2.5	\$39.95

#### Rubber Feet

equip. feet

31471 BU | \$3.50 ea 3M P/N SJ6316 peel-n-stick rubber

feet. Sheet of 24 Gray bumpers 7/8" in diameter X 3/8"tall. Ideal as shock absorbers.



Desktop Instrument

#### **Plastic Project Cabinets**

Black plastic project boxes with flat lids. Internal guides on ends & sides for holding PC boards. Includes cover screws. Note: 15881-BX has NO Internal Guides

Outside dimensions are listed below.



STOCK #	L"	W"	H"	WT.	1EA
15522 BX	3"	2"	1.16"	.07	\$2.49
15523 BX	4"	3"	1.6"	.13	\$2.95
15881 BX	4.41"	2.24"	.87"	.08	\$2.35
15518 BX	5"	2.5"	1.75"	.17	\$3.49
32652 BX	5.9"	3.9"	2.36"	.27	\$4.35
15883 BX	7.25"	4.5"	2.52"	.50	\$7.49

#### **Plastic Project Cabinets**

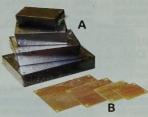
Black plastic project boxes with deep lids. Internal guides on ends & sides for holding PC boards. Includes cover screws. Outside dimensions are listed below.



STOCK #	L"	W"	H"	WT.	1EA
15885 BX	3.74"	1.89"	1.46"	.11	\$3.35
15886 BX	4.53"	2.36"	1.73"	.15	\$3.75
15520 BX	5.3"	3"	1.9"	.25	\$4.95
15887 BX	6.3"	3.74"	2.44"	.33	\$5.95
15888 BX	7.6"	4.53"	2.95"	.45	\$8.95
15521 BX	8.8"	5.5"	3.6"	.75	\$8.95

# **Plastic Project** Cabinets & Perf

Black plastic project boxes with Aluminum lids. Internal posts for holding PC boards. Includes cover & PC board screws. Solderable phenolic Perf. Board has .1" hole grid pattern, copper one side. All dimensions are aprox.



STOCK #	FIG.	SIZE	L"	W"	D/T"	WT.	1EA
15911 BX	A	Large	5-1/4"	3-1/4"	1-9/16"	.22	\$5.25
15912 PB	В	Large	4-5/16"	3-1/8"	1/16"	.04	\$1.75
15913 BX	A	Medium	4-1/8"	2-5/8"	1-9/16"	.15	\$3.50
15914 PB	В	Medium	3-1/8"	2-1/2"	1/16"	.02	\$1.10
15915 BX	A	Small	3-5/16"	2-1/8"	1-3/8"	.11	\$2.75
16227 PB	В	Small	2-5/16"	1-15/16"	1/16"	.02	\$0.79
15917 BX	A	Mini	2-11/16"	1-11/16"	1-3/16"	.08	\$2.50
15918 PB	В	Mini	1-3/4"	1-1/2"	1/16"	.009	\$0.59

#### **Extruded Aluminum Enclosures**

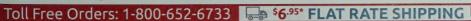
Extruded anodized 6063 aluminum instrument cases with black powder coated, cast aluminum end caps. Internal slots for holding PC board(s), 4 peel-n-stick rubber feet & stainless End Cap screws, IP66 rated when using the accessory Gaskets (sold separately) View Online additional accessories.



STOCK #	COLOR	L"	W"	H"	1EA
32740 BX	Silver	7-3/4"	4-9/16"	2"	\$19.95
32741 BX	Red	7-3/4"	4-9/16"	2"	\$19.95
32742 BX	Blue	7-3/4"	4-9/16"	2"	\$19.95
32743 BX	Black	7-3/4"	4-9/16"	2"	\$19.95







# Mini Toggle Switch

Mini toggle switch, Mounts in a 1/4" hole. Solder tab terminals. Rated 6 Amps @ 125VAC.





(Mom)-Off-(Mom)

# Mini Toggle Switch

31890-SW

Mini toggle switch, Mounts in a 1/4" hole. Solder tab terminals. Rated 5 Amps @ 125VAC.

DPDT



\$0.69

STOCK #	STYLE	DESC.	1EA
16071-SW	SPDT	On-(Mom)	\$0.58
16072-SW	SPDT	On-Off-(Mom)	\$0.58
16073-SW	DPDT	On- (Mom)	\$0.69
16074-SW	DPDT	On-Off-(Mom)	\$0.69
16075-SW	3PDT	On-On	\$0.74
16076-SW	3PDT	On-Off-On	\$0.88
16077-SW	4PDT	On-On	\$1.42
16078-SW	4PDT	On-Off-On	\$1.75

#### **SUB-MINI** TOGGLE SWITCH

Sub-Mini toggle switch, Mounts in a 1/8' hole with Solder tabs. Rated 1 Amps @ 250VAC. TUV Listed WT: .02



STOCK #	STYLE	DESC.	1EA
18677-SW	SPDT	On-None-On	\$0.43
18175-SW	DPDT	On-None-On	\$0.52
18676-SW	DPDT	On-Off-On	\$0.72

#### Lighted Pushbutton Switch



Momentary or Alternate Action (Push ON-Push-OFF), SPDT, Full size, metal body, Pushbutton switch with LED lighted Ring around Button. Mounts in a 3/4" hole.

Dia: 7/8" Mtg : 3/4" hole 1: 1-1/2" O/A WT: 04

STOCK #	DESC.	1EA
31370-SW	Red Momentary Switch	\$4.95
31371-SW	Green Momentary Switch	\$4.95
31372-SW	Blue Momentary Switch	\$4.95
31375-SW	Red Alternate Action Switch	\$5.95
31376-SW	Green Alternate Action Switch	\$5.95
31377-SW	Blue Alternate Action Switch	\$5.95

#### Pushbutton Switch



12-67 reted, CMP #MP19S-F10, Flat Button, Metal Body, SPST-NO, Pushbutton switch. Mounts in a 3/4" hole. Dia: 7/8" Mtg.: 3/4" hole L: 1-1/16"O/A

STACE STATE	DESC.	TEA .
32091-597	Red Momentary P/B Switch	\$4.95
32092-SW	Green Momentary P/B Switch	\$4.95
32093-SW	Slue Momentary P/B Switch	\$4.95
32094-SW	Gold Momentary P/B Switch	\$4.95
32095-SW	Black Momentary P/B Switch	\$4.95

#### **Full Size 15A** Toggle Switch

.25"Quick Connect terminals.

Standard size toggle switch, Mounts in a 15/32" hole. Rated: 10 Amps @ 250VAC. 15A @125VAC.



STOCK #	STYLE	DESC.	1EA
18371-SW	SPDT	On-None-On	\$1.95
18372-SW	SPDT	(Mom)-Off-(Mom)	\$1.95
18373-SW	DPDT	On-None-On	\$1.95
18374-SW	DPDT	On-Off-On	\$1.95
18375-SW	DPDT	(Mom)-Off-(Mom)	\$1.95

#### **Full Size 15A Toggle Switch**

Standard size toggle switches, Mounts in a 1/2" hole. Rated: 10 Amps @ 250VAC. 15A @125VAC.

	WT: .08	
STYLE	DESC.	1EA
SPDT	On-None-On	\$0.88
SPDT	On-Off-On	\$0.95
SPDT	On-None-(Mom)	\$1.05
SPDT	On-Off-(Mom)	\$1.05
SPDT	(Mom)-Off-(Mom)	\$1.05
DPDT	On-None-On	\$1.24
DPDT	On-Off-On	\$1.24
DPDT	On-None-(Mom)	\$1.49
DPDT	On-Off-(Mom)	\$1.49
DPDT	(Mom)-Off-(Mom)	\$1.49
	SPDT SPDT SPDT SPDT SPDT DPDT DPDT DPDT	STYLE         DESG.           SPDT         On-None-On           SPDT         On-Off-On           SPDT         On-None-(Mom)           SPDT         On-Off-(Mom)           SPDT         On-Off-(Mom)           DPDT         On-None-On           DPDT         On-Off-On           DPDT         On-None-(Mom)           DPDT         On-Off-(Mom)

#### **Heavy Duty 20A** Toggle Switches

Standard size toggle switches, Mounts in a 1/2" hole. Rated: 15 Amps @ 250VAC. 20A @125VAC. Screw terminals.



		W1:.03	
STOCK #	STYLE	DESC.	1EA
12216-SW	SPST	On-Off	\$1.50
12217-SW	SPDT	On-On	\$1.50
12218-SW	SPDT	On-Off-On	\$1.60
12219-SW	DPST	On-Off	\$1.95
12221-SW	DPDT	On-Off-On	\$2.50

#### Misc. Toggle Switches







25001-SW 12223-SW Full size toggle switch, Amp Ratings are @ 125VAC. 5001: Wire leads 5002: Solder tab 5004 & 12223: Screw

Mtg. Hole: 1/	2 note	WI:	.07	
STOCK #	STYLE	DESC.	AMP	1EA
25002-SW	SPST	On-None-Off	4	\$0.75
25001-SW	SPST	On-None-Off	6	\$1.25
12223-SW	SPST	On-None-Off	10	\$1.25

#### **Full Size** Toggle Safety Covers

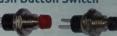


Plastic, Snap action safety covers for standard (1/2" Dia.) sized toggle switches. Cover must be opened to activate switch. Closing cover forces switch to original position.

		WT: .03
STOCK #	DESC.	1EA
16100-SW	Red Safety Cover	\$0.69
16105-SW	Black Safety Cover	\$0.69
16106-SW	Clear Safety Cover	\$0.69
16108-SW	Transp Ped Safety Cover	\$0.69

#### **Switches**

# Push Button Switch



SPST Mounts in a 1/4" hole N.O. = Normally open N.C. = Normally closed 25019 SW | N.O. Red | \$0.29 ea 25020 SW | N.C. Black | \$0.29 ea

#### **Push Button Switch** 16093 SW | \$2.02 ea

SPST Normally open Mounts in a 3/4" hole. Metal Face



#### **Foot Switch**

18150 SW | \$5.95 ea SPST Normally open Metal petal with 1 meter pigtail.

#### Metal X-Y Keypad 32340 SW \$4.95 ea

3 X 4 pad with X-Y matrix



#### X-Y Key Pads

31045 SW | 3x4 pad | \$2.95 ea 31046 SW | 4x4 pad | \$2.95 ea Peel and stick keypad with





#### SP5T Rotary Switch 32597 SW | \$0.99 ea

Single pole 5 positions



# **BCD Thumb Switch**

32083 SW | \$0.75 ea 0-9 push button

BCD switch. End plates avaiable on-line.







#### **Panel Meters**

#### **Multi Function** AC LCD Panel Meter

32409 ME | \$19.95 ea 260VAC 20A with internal CT. Volt, Current, Power and Energy Display



#### **Dual Display AC LED Panel Meter**

**30301 ME | \$19.95 ea** 300VAC 100A with external CT. Voltage and Current Display



# **Dual Display**

**AC LED Panel Meter** 33407 ME | \$22.95 ea Din Rail Mount 300VAC 100A with internal CT. Voltage and Current Display

12VDC LED Panel

32322 ME | \$12.95 ea

**Multi Function** 

32541 ME | \$17.95 ea

DC LCD Panel Meter

Meter with Bar Graph

\*\*\*\*\*

# **Dual Display AC LED Panel Meter**

**Multi Function** 

AC LCD Panel Meter

**32403 ME | \$24.95 ea** 260VAC 100A with external CT. Volt,

Current, Power and Energy Display

32710 ME | \$19.95 ea 300VAC 200A with external CT. Voltage and Current



# **Multi Function** AC LED Panel Meter

31567 ME | \$19.95 ea 600VAC 100A with external CT. Voltage, Current and Frequency Display Requires external 12VDC power source



# **Dual Display**

30303 ME | \$12.95 ea 4.5-30VDC 10A with internal Shunt. Volt and Current Display



# DC LED Panel Meter



# **Multi Function**

100VDC 20A with internal Shunt, Volt.



100VDC 100A with external Shunt. Volt, Current, Power and Energy

#### **Multi Function** AC LED Panel Meter

**32404 ME | \$24.95 ea** 260VAC 100A with external CT. Power, Energy, Voltage and Current Display



#### **Dual Display** AC LED Panel Meter

33152 ME | \$14.95 ea 300VAC 50A with external CT.

Voltage and Current Display



#### 3 Digit 60-300VAC LED Panel Meter

Visit www.mpja.com for Complete Product Line

30220 ME | Red | \$6.95 ea

31493 ME | Green | \$6.95 ea 31494 ME | Blue | \$6.95 ea

Snap-in self LED powered meter 1Volt resolution 0.56" Character height 6" wire leads sine wave only!



#### **Dual Display** AC LCD Panel Meter

31496 ME | \$17.95 ea 300VAC 100A with external CT. Voltage and Current Display

**Dual Display** 

Volt and Current Display

32063 ME | \$17.95 ea



4.5-30VDC 100A with external Shunt.

# 10-199Hz Frequency AC LCD Panel Meter

32406 ME | \$14.95 ea



#### 3.5-30VDC 5 Digit DC LED Panel Meter Panel Meter

32711 ME | \$12.95 ea



# DC LCD Panel Meter

32542 ME | \$18.95 ea

Display



# Mini 3 Digit 4.5-30VDC LED Panel Meter

33065 ME | Red | \$5.95 ea 33066 ME | Green | \$6.95 ea

33067 ME | Blue | \$6.95 ea

LED self powered meter 0.1/.01 Volt resolution auto range 0.56" Character height 5" wire leads. With Bezel.



# Mini 3 Digit 4.5-30VDC LED Panel Meter

19598 ME | Red | \$4.95 ea

19599 ME | Blue | \$4.95 ea 19600 ME | Green | \$4.95 ea 5" wire leads. No Bezel.

LED self powered meter 0.1Volt resolution .375" Character height



# 0-5Amp DC LED Panel

32924 ME | \$8.95 ea



#### Mini 3 Digit 0-100VDC LED Panel Meter

32321 ME | \$3.95 ea Requires a separate

**Power Supply** 2.5V-30VDC for meter





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USB 3.1 Adapter Type "C" Plug to HDMI Jack 34370 CB

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\$3.95 ea

8 Digit 100KHz-2.4Ghz Frequency Meter 34112 TE | \$18.95 ea



1 Channel Portable Digital Storage Ocilloscope 33207 TE | \$79.95 ea



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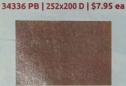
#### Copper Clad Boards

1/16" thick FR4 Base material with 1oz. copper

All measurements are in millimeters

S = single sided D= double sided

34330 PB | 68x100 S | \$0.89 ea 34331 PB | 100x150 S | \$1.25ea 34332 PB | 202x150 S | \$2.95 ea 34335 PB | 150x150 D | \$2.35 ea



12 Vdc 8.5A 100W



**LED Dimmer Module** 12-24VDC 30A

33920 MI \$14.95 ez



20A 12-80V DC Motor Speed Control

33377 MD \$15.95 ea



3 VDC 1A Plug **Power Supply** 34472 PS



12 Vdc 1A Plug **Power Supply** 

3.5mm O.D. output connector 34290 PS \$1.95 ea



12 Vdc 12.5A 150W Switching Supply

33468 PS \$14.95 ea

## **Mechanical Relays**

33971 RL | 12vdc DPDT | \$2.50ea 33975 RL | 12vdc 3PDT | \$2.95ea 33972 RL | 110vac DPDT | \$2.50ea 33976 RL | 110vac 3PDT | \$2,95ea



**Relay Socket** 33974 RL | DPDT | \$1.95 ea 33978 RL | 3PDT | \$1.95 ea



**Duplex Outlet** Expander 34493 MI \$4.95 ea



USB Cable, A Male to Micro B Male

34479 CB \$4.95 ea



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